

## KENYA

*By a Special Contributor*

**K**enya is located in Eastern Africa and borders the Indian Ocean. It lies between Somalia to the north and Tanzania to the south. Covering some 580,000 km<sup>2</sup>, it is rather larger than France and has a population of some 32 million. The capital city is Nairobi. The economy is reasonably diversified but agriculture is the principal source of employment, the Kenyan Highlands representing one of the most productive regions in Africa. The country is the world's third-largest exporter of tea, and together with coffee and horticultural products, contributes more than half of Kenya's merchandise exports. In 2003, agriculture contributed 20% of GDP, industry 18% and services 62%. Per capita GDP is estimated at about US\$1,000. The economy grew by only 1.2% last year, mainly as a result of low commodity prices and low levels of investment. Mineral commodities still contribute slightly less than 1% to GDP.

Since 1940, mineral resource development in Kenya has been governed by the Mining Act, Chapter 306 of the Laws of Kenya. The Act was reviewed on two occasions, in 1972 and 1987, and recently it has been revised into the new Mining and Minerals Act. The new Act requires that all prospecting licences have an initial duration of four years with renewals granted for up to seven years. Exploration licences are transferable. The licensing authorities have less discretionary powers and there is greater security of tenure. The law regularises the activities of small-scale miners and also recognises the requirements of the new Environmental Management and Co-ordination Act of 1999. The Environmental Act has now been passed into law.

Since its formation in 2001-02, the Kenya Chamber of Mines (KCM) has become an active player in the mining sector of Kenya. Currently, the larger mining companies in the country are still financing the Chamber's activities, but it is hoped that it will become self-sustaining in the near future. The KCM in conjunction with the Kenya Geological Society have been promoting mining activities in Kenya.

### **Mineral sands**

By far the most significant new mineral project in Kenya is Tiomin Resources Inc's Kwale mineral sands project. The Kwale deposit is in the Pliocene age Magarini Sands Formation, which forms a belt of low hills running parallel to, and inland from, the coast. The thickness of the deposit ranges from an average of 30 m for the South Dune to 40 m in the North Dune. The highest concentration of heavy minerals is in the Central Dune – 5.7% total heavy minerals through an average thickness of 28.5 m. The three deposits represent a combined resource of 254 Mt of mineralised sand containing 4 Mt of ilmenite, 1 Mt of rutile and 600,000 t of zircon. An environmental impact study was completed in November 2000, an environmental licence was issued in July 2002 and an environmental management plan approved by the

Kenya Government in January 2003. The company received a mining licence in September 2003.

Capital costs for Kwale are estimated at US\$120 million. Mine life is estimated at ten years and during the first six years of production, annual output should exceed 330,000 t of ilmenite, 77,000 t of rutile and 37,000 t of zircon.

Several other mineral sands deposits have been identified at various localities along Kenya's coast, including: Sabaki (100 Mt), Mambrui (700 Mt), Sokoke (1,700 Mt) and Vipingo (500 Mt).

The improvement in gold prices has fostered interest in Kenya's gold potential, and two companies have both posted significant progress in their exploration programmes. Kansai Mining Corp, listed on the Toronto Venture Exchange is focusing on its Migori gold project in southwest Kenya and has increased the gold resource there to 1.24 Moz following the completion of a drilling programme in the second quarter of 2004. Attention was directed towards four zones of mineralisation: Kakula-Kalange-Munyu, which covers a strike length of some 3 km; Gori Maria, which shows broad widths of low-grade mineralisation over some 400 m of strike; the MK zone, where there could be high-grade shoots; and Nyanza, where there could be a zone of high-grade mineralisation is suspected. Exploration continues at all four prospects and further drilling is planned.

TSX-listed AfriOre Ltd has its focus on the belt of Nyanzian rocks in western Kenya. These are an extension of the same Nyanzian succession in neighbouring Tanzania, which hosts a number of major gold mines. The company acquired an option to acquire 100% of the 1,319 km<sup>2</sup> Ndori licence area in 2002 and has since identified a number of targets. In November 2002, the company acquired a special prospecting licence over the 1,514 km<sup>2</sup> Siaya area which includes the former Kibiri mine. In addition, AfriOre considers that both licence areas have kimberlite potential, and in the eastern part of the Siaya area there is also potential for zinc, copper and silver at the Bumbo prospect.

During 2003, AfriOre carried out extensive mapping, pitting and trenching, and identified six priority targets, and follow-up drilling commenced in 2004. The main interest is at Kibiri and Masumbi in the Barding area. Both possess wide zones of low-grade mineralisation at surface.

At present there is no formal gold production in Kenya but it has been estimated that artisanal operations are producing as much as 5 t/y. The main gold workings are in the west and southwest parts of the country on several small greenstone belts, and the principal activities are at Mukbira, Koriandus, Kibonwa, the Kerio Valley, West Pokot and Macalder.

The profitable gemstone-mining sector that was hit hard by the recession in the world economy has picked up slightly. Rubies, tourmaline and garnets (tsavorite, rhodolite and grossularite) are mined from well-known localities in

the Taita-Taveta district, Kwale. Rockland (UK) Ltd continues to be prominent in the mining and exportation of ruby, and Bridges Exploration Ltd continues to mine green garnet (tsavorite).

In terms of income, industrial minerals are the most important products in Kenya's minerals sector, and soda ash from Lake Magadi accounts for 74% of the total value of mineral exports. At the end of 2003, the private sector affiliate of the World Bank, the International Finance Corp, signed an agreement to provide US\$26 million in loans to Magadi Soda Ash Co Ltd as part of a US\$55 million loan package, to help finance the construction and operation of a 365,000 t/y capacity high-purity soda ash plant for export to emerging markets in Asia, Africa and the Middle East. Magadi Soda is a subsidiary of Brunner Mond Group Ltd (UK) and is Africa's largest soda producer, with current exports of some 330,000 t/y of lower-grade soda ash. It is Kenya's second-largest currency earner and its operations at Lake Magadi represent the only substantial activity in a remote area of Kenya.

Fluorspar is the second most important industrial mineral. It is mined by Kenya Fluorspar Ltd near Eldoret in the Kerio Valley. In 2003, it produced around 100,000 t of fluorspar, and an increase in production capacity is being considered. Kenya Fluorspar was acquired by Nairobi-based Minerals and Chemicals Manufacturers Ltd in 1996 when the government offered its 100% interest in a public tender.

Exploitation of diatomite has continued at Soysambu and Kariandusi in the Nakuru district but demand has been significantly reduced owing to the closure of some companies that were using diatomite in refining their products. Dimension stone is produced by Francescon Marble and Granite Ltd, and Francescon Mineral Holdings Ltd, for both the local and export markets.